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The effect of scientific-text coherency assisted by paragraph regarding the reader's performing speed

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Abstract

One of main purposes of this research was to study and compare the different type's texts and paragraphing on speed of operation within university students. The sample group, who were selected through random sampling, was 100 students studying run state universities. The subjects were randomly assigned into experimental groups after random sampling. The instrumentation of the study included texts that represented by for different structures and also text attitude questionnaire. . The text included three versions of passage with identical content but different structures but the topic of them was similar content .The collected data were analyzing applying ANOVA and tukey tests. The statistical analysis indicated that text paragraphing would influence study time.

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1. Introduction

Chamblice and Cal fee opinion on the characteristics of a well-organized book is its comprehensibility and more of that is its readability. Readability means instead of having a teacher-cantered text have a student-cantered text. In addition equips and supports the development of logical thinking in the learner.

Clearly we cannot consider all the writings a scientific text, a passage not having the requirements of text is not easily understood and will not haves the needed effect.

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A text should be written enough, direct and considering sequence and good order. Some of the well-known researchers such as Olson & Mack & Duffy (1981) believe that a good text is which the reader understands it better or that reads it faster.

Martins, Kigil & Laros (2006) understood that a coherent text would lead to better comprehension and easier recognition. In addition it will affect the reading time and the text comprehension test progress. At the end explicit text will take less time to read comparing to implicit ones.

Baker and Anderson (1982) found that a testable would take the most time eliminating the inconsistent data from the main thesis also to control and verify a comprehension text; inconsistent and contradictory sentences should be read again. In addition this study showed that having inconsistent data regarding the main thesis would extend the reading time.

Choha, Rabinotiz and Shaibel (1989) showed that un-necessary additional information in the text would make the reader to spend a lot of time eliminating that information that will lead to a prolonged reading time, As Olson & Mack & Duffy (1981) reported during their study that a proper text is which the tester studies and understands it faster (Fayol, 1991).

Thus considering Olson & Mack & Duffy (1981) opinion and the definition of reaction time or performance as one of the old parameters of learning, in this study two time are considered as the complement parameters of the comprehending the text:

1. Response time: From Cal fee and Drum's (1987) view is the amount of time needed for the tester to answer the comprehension text test.
2. Study time: defines the time needed to read a text. Olson & Mack & Duffy (1981)

Now this question appears that how should text be in order to affect the performance speed?

According to Alfred North White head, human mind is naturally ready for exerting the epitome of "order" into the existence of "Chaos". In point of fact, it could well be asserted that human beings conduct the organization for the sake of survival (subsistence). This very point can masterfully bring out the significance of observing the principle of "Coherence"; that is to say, : granting order onto the intended piece of writing. The essential goal of homogenization and organization of the text comes to be having a set of distinct discrete mosaic units of disparity into a whole Gestalt of meaningful framework through the auxiliary medium of suitable connectors (Chambliss & Cal fee, 1998, page 18).

In such a text, both the sentences and the monolithically integrated paragraphs follow one upon the other with some logical order, all acting for the aim of expressing the same intentionality (Lepionka, 2003). In any writing, coherence depends on two parameters: paragraphs and sentences (Kies, 2010).

As a result there is no possibility of even starting to talk of writing techniques without any notion of "paragraph" having been born in mind. According to Nystrand (1986), a paragraph is the most important signification of punctuation among sentences. Additionally, this term is of Greek origin, itself comprising of two different parts of "Para" meaning "beyond" and "graph" meaning "scheme, pattern, plan, bass [relief]".

Rodgers (1976) defines a paragraph in the following manner: "The fundamental to a paragraph would be a segment or a part of a (more) holistic discourse, while being the unit of discourse cannot be the only characteristic of a paragraph. Instead, since the writer applies "indentation" to divide the paragraph into "Indented Segments", the totality of the piece of writing has been adorned by means of the paragraph. This is no different than the other techniques of punctuation …finally; a piece of writing would be created which appears in the shape of distancing [segmental zed]." (Quoted from Nystrand, 1982, page 80)

The significance as of this specific technique of writing is because the reader comprehends the rhythmic and the coherence of the writing's contents through paragraphisation. As a consequence, paragraphing – conditioned it is deemed as coherence and making distinct a whole heap of materials – would be an Aesthetic, Literally Stylistic, and functional concept.

The aesthetic dimension to a paragraph is visible within a printed page, and the visual effect could make the material rhythmic and prominent in the reader's mind. The stylistic dimension refers to the interrelationships among sentences and the transference from one sentence to the next; the stylistics also refers to the length and the depth of sentences. Finally, the functional value to a paragraph comes out full well during the process of framing certain content, hierachicalizing the rationalization thereof, bringing a process into steps etc…. (Nash & Stacy, 1997).

From the theoretical and conceptual standpoint, Holiday and Hassan (1976) consider "Cohesion" to be a network of relations among different parts of the text, which arise from Lexical and Grammatical parameters (Kaufmann, 2000).

The same problem is observable in studying investigation records. Kintch and Van Dijk (1978), Seidenberg (1989), Chou ha, Rabinotiz and Shiabel (1989), Chambliss et al. (2007), Marins , Kigil and Laros (2008)have all put emphasis on the functionality of bringing paragraphing into the text.

For the reason that the importance and the necessity of the history mentioned above cannot be overlooked, one of the axial goals to the present investigation is delving into paragraph efficiency within the context of Persian writing, in addition to its effect on the attitude.

For the reason that the importance and the necessity of the history mentioned above cannot be overlooked, one of the axial goals to the present investigation is delving into paragraph efficiency within the context of Persian writing, in addition to its effect on the attitude.

So the appearing question as the core of the present project and which the article is related is: Does text coherency affect the learners performing speed?

2. Method

2.1. Participants:

100 students of university participated in this experiment. The students completed comprehension questionnaire after text studying. One of the groups has received different text of others. Moreover, the stages of implementation and testing conducted during current classes and with teachers.

2.2. Design:

The subjects assigned randomly into 4 experimental groups. These groups arranged in factorial design.

The design was a 4(text coherence).this design is one way factorial. Half of the design was belong to text structure or paragraphing.

2.3. Materials:

2.3.1. Texts

The greatest instrument applied in this study consisted of three (4) texts of the different structures. The topic of them was similar content. The only of different among them would:

1. A paragraphed text, which the assisting sentences are in the middle of the article.
2. A paragraphed text, which the assisting sentences are at the beginning of the article.
3. A paragraphed text, which the assisting sentences are at the end of the article.
4. A random un-paragraphed text with random structure.

Therefore, the only dimension of difference among the three texts was their structure. Writing and testing (stability and internal validity) of them took about 2 months.

2.3.2. Comprehension Questionnaire:

In this research applied: 1) expository text 2) comprehension test. But, I wouldn't discuss a bout comprehension testing, because the central variables are structure and attitude in this paper. In order to study and inform about structures and comprehension, additionally, refer to other articles of author.

2.4. Procedure

In this study we have asked the students that besides calculating the study time, review it once without regression. Regarding this 20 min has been considered although each tester studied his text in a different time afterwards, in returning the text to the researcher a comprehension test questionnaire and the answers were given to him/her.

After that the tester started to read the answers of the comprehension test questionnaire in the first page of its questionnaire and considering the answering time started to fill it up.

However, the comprehension questions were counted as 29 the maximum time was considered as 29 min to answer the questions. In the mean time we asked the testers to calculate the answering time and write it down on the provided place on the top of the page. Regarding this researcher examined the texts and the answers during this experiment.

3. Results

According to table 1:

the F index calculated (2/17) in the area of 0.05 is meaningless (F=2.17, P>0.05). Thus we can admit with 95% accuracy that, assuming zero as the basis of the equality of the average of these four groups is rejected.
Research on this data is that the consistency of the text is affects the responding time on answering the passage questions.
According to table 2:
the F index calculated (0/013) in the area of 0.05 is meaningless (F=0/013, P>0.05). Thus we can admit with 95% accuracy that, assuming zero as the basis of the equality of the average of these four group testers is verified.
Research on this data is that the consistency of the text has no affect the study time reader.
According to table 3:
The most time spent on answering the comprehension questions is on the random text. This is due to that the paragraphed text having the main supporting sentences at the end of the paragraph has had the least time of answering the questions.

4. Conclusion

According to the calculated indexes it is noted that the text consistency does not affect the “study time” of the sub-groups.

Researches show from one side that the text consistency does not affect the study time (testers text functioning speed) and this builds more vagueness such as weather “Is really a proper text one which the reader finishes it faster?”

On the other hand researchers such as Cal fee and Drum’s (1977) opinion are that individual differentiations are considerable regarding the text reacting speed. Through these parameters the readers learning style is notable. Researchers such as Olson & Mack & Duffy (1981) reported that “time” is an important factor on the proficiency of the text.

The results of this research suggest further studies. Another point that adds to the complication of the subject is that a random and messed up text will take more time and a coherent one will take less. Researches on this division did not fit our assumptions! However regarding the coherency of the text “time spending to answer the questions of the text” results was different.

Briefly, although logically it appears that a well-organized text should take less time from the reader but there may be many effective parameters and causes such as the style and conduction of the test, text distribution, individual differentiations and … all affect the procedure. Consequently, intermediary parameters should be considered in the next researches beside the “speed/time of performance” as related functions on reading comprehension.

Table 1.statistical analysis (the effects of texts study time)

Type of texts	M	SD	N	F	Effect size
1) A paragraphed text, which the assisting sentences are in the middle of the article	8/76	2/61	25		
2) A paragraphed text, which the assisting sentences are at the beginning of the article.	9/36	1/44	25	2/17	0/910
3) A paragraphed text, which the assisting sentences are at the end of the article.	9/24	2	25		
4) A random un-paragraphed text with random structure.	8/88	3/58	25		

** p< N.S, ** p<0.05, *** p<0.01*

Table 2.statistical analysis (the effects of texts on response time)

Type of texts	M	SD	N	F	Effect size
1) A paragraphed text, which the assisting sentences are in the middle of the article	14/28	4/08	25	0/013	0/910
2) A paragraphed text, which the assisting sentences are at the beginning of the article.	12/32	3/74	25		
3) A paragraphed text, which the assisting sentences are at the end of the article.	14/52	3/001	25		
4) A random un-paragraphed text with random structure.	11/60	3/47	25		

** p< N.S, ** p<0.05, *** p<0.0*

Table 3.Results of Tokay's follow-up test for studying significance different between texts

Type of texts	1	2	3	4
1) A paragraphed text, which the assisting sentences are in the middle of the article	–	1/21	-0/69	1/48
2) A paragraphed text, which the assisting sentences are at the beginning of the article.	-1/21	–	-1/90	0/266
3) A paragraphed text, which the assisting sentences are at the end of the article.	0/693	1/90	_	2/17*
4) 4) A random un-paragraphed text with random structure.	-1/48	-0/266	-2/17*	_

* $p<0.05$

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